

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2007-\_\_\_\_\_

WASTE DISCHARGE REQUIREMENTS  
FOR  
STOCO MUTUAL WATER AND SEWER COMPANY  
WASTEWATER TREATMENT FACILITY  
KERN COUNTY

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The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. The Stoco Mutual Water and Sewer Company, a California corporation, owns and operates a wastewater treatment facility (WWTF). The property on which the WWTF resides and where the discharge occurs is jointly owned by Lawton Powers, Inc., and the Stoco Mutual Water and Sewer Company (hereafter jointly referred to as Discharger). The WWTF provides sewerage for a gas station, two restaurants, and two motels.
2. The WWTF is along Interstate Five and the Stockdale Highway, approximately one-mile northeast of Tupman, in the northeast quarter of Section 6, T30S, R25E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference.
3. Waste Discharge Requirements (WDRs) Order No. 74-387 adopted on 26 July 1974, restricted the monthly average discharge flow to 0.05 mgd. The WDRs require that the Discharger maintain a minimum dissolved oxygen (DO) of 1.0 mg/L in the ponds to prevent nuisance.
4. The purpose of this Order is to rescind WDRs Order No. 74-387 and prescribe requirements that are consistent with Regional Water Board plans and policies.

**Wastewater Treatment Facility**

5. The WWTF consists of the wastewater collection system, an influent pump station, and two evaporation and percolation ponds (Ponds 1 and 2). Wastewater from the pump station is discharged to Pond 1, about 1,500 feet southeast of the pump station. Originally the WWTF was designed to discharge to a 2.67-acre primary unlined stabilization pond (Pond 1), followed by a 1.33-acre unlined polishing pond (Pond 2), each are about 8 ft deep. The Discharger has since "cross-cut" Pond 1 into four separate smaller ponds (Ponds 1.a. through 1.d.) that are about 2 – 3 feet deep. Wastewater is discharged to each pond as necessary. Pond 2 is rarely, if ever, used.
6. Currently, the Discharger does not have a method for removing headworks waste, but intends to install a grinder pump. Sludge, if removed from Pond 1.a. through 1.d., is typically stockpiled onsite. If sludge is not removed, Pond 1.a. through 1.d. are dried and the sludge disced into the bottoms.

7. Historically, the WWTF was equipped with a wastewater flow meter, which is no longer functional. The Discharger is currently monitoring flow using water usage meter readings.
8. Data to characterize the discharge is limited; however, results from a June 2007 Regional Water Board staff inspection characterize the wastewater in Pond 1.a as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Discharge</u>
Monthly Average Discharge Flow	mgd	0.02 to 0.03 <sup>1</sup>
Conventional Pollutants		
BOD <sup>2</sup>	mg/L	16
TSS <sup>3</sup>	mg/L	96
Salts		
Chloride	mg/L	100
Boron	mg/L	0.19
Sodium	mg/L	120
EC <sup>4</sup>	µmhos/cm	880
Nitrogen Forms		
Nitrate as Nitrogen	mg/L	0.63
Total Nitrogen <sup>5</sup>	mg/L	52

<sup>1</sup> Values estimated using water meter readings provided by the Discharger.

<sup>2</sup> 5-day biochemical oxygen demand (BOD)

<sup>3</sup> Total suspended solids (TSS)

<sup>4</sup> Electrical conductivity at 25°C (EC)

<sup>5</sup> Calculated by summing the concentrations of nitrate as nitrogen and TKN, and assuming the concentration of nitrite is negligible.

9. Insufficient data exists to adequately characterize source water and discharge EC. However, based on the results from a June 2007 Regional Water Board staff inspection, the discharge is about 570 µmhos/cm greater than the source water.

### Site-Specific Conditions

10. The WWTF is in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 5.69 inches and 108 inches, respectively, according to information published by California Department of Water Resources (DWR).
11. Soils in the area are of the Kimberlina series according to the USDA Natural Resources Conservation Service. Soils are sandy loams to a depth of approximately 3 feet. Soils below 3 feet are typically stratified and sandy loams. Permeability is considered to be moderately rapid.

12. The WWTF is not within a 100-year floodplain according to Federal Emergency Management Agency maps.
13. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System general industrial storm water permit for the WWTF because all storm water runoff is retained onsite and does not discharge to a water of the United States.
14. Land use in the WWTF vicinity is agricultural with a confined animal operation less than one-mile northwest of the WWTF, and the community of Tupman one-mile southeast. The majority of the land use in the area is native vegetation. The primary crops grown within five miles of the WWTF include cotton, wheat, alfalfa, corn (forage), almonds, and to a lesser extent carrots, and grains according to DWR land use data published in 1998. Irrigation water is supplied by both groundwater and surface waters. Some salt sensitive crops (e.g., carrots, almonds) are grown in the area. The WWTF and its discharge is approximately two miles north of the Kern Water Bank Authority which recharges groundwater using high quality surface waters. Discharge from the WWTF is regionally downgradient of the Kern Water Bank Authority and a minor fraction of the total volume percolated.
15. The WWTF's ponds are in a remote location that limits public access; therefore, the potential for nuisance is minimal.

### **Water Recycling**

16. The Discharger is not implementing water recycling. Flows at the WWTF are currently low and the Ponds remote. Given the existing conditions, water recycling is likely not feasible unless the flow increases and additional treatment is provided.

### **Groundwater Considerations**

17. Regional groundwater is approximately 50 to 100 feet below ground surface (bgs) and flows generally north to northeasterly, with a perched groundwater table at about 20 feet bgs according to information in the Kern County Water Agency's *Water Supply Report 1999* (Water Supply Report), dated May 2003. In the discharge vicinity, the "modified E-clay" layer occurs about 350 to 400 feet bgs and is about 20 feet thick, according to *Geology of Fresh Ground-Water Basin, Central Valley, California, with Texture Maps and Sections*, by R. W. Page (U. S. Geological Survey Professional Paper 1401 – C, Washington, 1986). Regional groundwater data from the Water Supply Report indicates that the EC (converted from TDS) in the unconfined aquifer ranges from 850 to 1200  $\mu\text{mhos/cm}$ . However, groundwater data within the area is limited.
18. The Discharger obtains its source water from an onsite well owned by the Discharger. The source water is of good quality according to data obtained from the State Water Board's Geotracker database. Excerpts of this data are presented below:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Value</u>
Arsenic	µg/L	5.9
Chloride	mg/L	19
EC	µmhos/cm	250
Nitrate (as N)	mg/L	1.5
TDS	mg/L	67

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

19. The Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition, (hereafter Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.
20. Water in the Tulare Lake Basin is in short supply, requiring importation of surface water from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water. As indicated in Finding 15 above, the Discharger is not implementing water recycling. Recycling effluent in the future may be possible as development of land surrounding the area or site conditions change.
21. The WWTF is in Detailed Analysis Unit (DAU) No. 255 within the Kern County Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in this DAU as municipal and domestic supply, agricultural supply, industrial service supply, and wildlife habitat [supply].
22. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan recognizes that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
23. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

24. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:
- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500  $\mu\text{mhos/cm}$ . When the source water is from more than one source, the EC shall be a weighted average of all sources.
  - b. Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or boron content of 1.0 mg/L.
- These effluent limits are considered best practicable treatment or control (BPTC).
25. The list of crops in Finding 14 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Crops sensitive to salt and boron are currently being grown in the area are primarily due to the importation of high quality surface water.

#### **Antidegradation Analysis**

26. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution No. 68-16) prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - d. The discharger employs BPTC to minimize degradation.
27. The discharge is an existing discharge and will not change in character or volume from that allowed by WDRs Order No. 92-035. The overall mass of constituents, and therefore, the potential to impact water quality, remain unchanged.
28. This Order establishes groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

### **Other Regulatory Considerations**

29. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in Title 40, Code of Federal Regulations, Part 503, Standards for the Use or Disposal of Sewage Sludge, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA. The RWD states that all biosolids will be hauled to a separate permitted facility.
30. As the discharge consists of treated domestic sewage and incidental discharges from treatment and storage facilities associated with a domestic wastewater treatment plant, and as these discharges are regulated by waste discharge requirements consistent with applicable water quality objectives, the WWTF and its discharge is exempt from containment pursuant to Title 27, Section 20090(a).

### **CEQA**

31. The Discharger is not increasing discharge flow or changing the nature and character of its discharge, therefore the issuance of this Order is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended).

### **General Findings**

32. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
33. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
34. California Water Code Section 13267(b) states that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

35. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2007-\_\_\_\_\_ are necessary to assure compliance with these waste discharge requirements. The Discharger operates the Facility that discharges the waste subject to this Order.

### Public Notice

36. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

37. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

38. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, Waste Discharge Requirements Order No. 98-005 is rescinded and that, pursuant to Sections 13263 and 13267 of the CWC, the Stoco Mutual Water and Sewer Company and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

#### A. Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in California Water Code Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

#### B. Effluent Limitations

1. The monthly average discharge flow shall not exceed 0.05 mgd.
2. The annual average EC of the discharge shall not exceed 1,000  $\mu$ mhos/cm calculated on a monthly basis.

### C. Discharge Specifications

1. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. Public contact with effluent shall be precluded through such means as fences, signs, or acceptable alternatives.
3. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
4. Disposal ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
5. On or about **1 October** of each year, available disposal pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification C.4.
6. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.
  - c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
  - d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.
7. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

### D. Sludge Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to

federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation.

1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc. as needed to ensure optimal plant operation.
2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property.
3. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water quality control board or State Water Board or a local (e.g., county) program authorized by a regional water quality control board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-DWQ, "General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities"). For a biosolids use project to be authorized by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

#### **E. Pretreatment Requirements**

1. The Discharger shall implement the necessary controls to ensure incompatible wastes are not introduced to the treatment system. These include, at a minimum: (a) wastes that create a fire or explosion hazard, or corrosive structural damage to the treatment works; (b) solid or viscous wastes in amounts that cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works; (c) petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through; (d) pollutants that result in the presence of toxic gases, vapors, or fumes within the treatment works; and (e) any trucked or hauled pollutants, except at points predesignated by the Discharger.

2. The Discharger shall implement the controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:
  - a. Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
  - b. Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

#### **F. Groundwater Limitations**

1. Release of waste constituents from any treatment or storage component associated with the WWTF shall not cause or contribute to groundwater:
  - a. Containing concentrations of constituents identified in Title 22 in excess of the MCLs quantified therein, or natural background quality, whichever is greater; or
  - b. Containing taste or odor-producing constituents, or toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

#### **G. Provisions**

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provision(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2007-\_\_\_\_\_, which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.
3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger shall not allow pollutant-free wastewater to be discharged into the Facility collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.
5. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the

Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.

6. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Regional Water Board office.
9. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

10. As a means of discerning compliance with Discharge Specification C.3, the dissolved oxygen content in the upper zone (1 foot) of effluent in disposal ponds shall not be less than 1.0 mg/L for three consecutive sampling events. Should the DO be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board and propose a remedial approach to resolve the low DO results **within 30 days**.
11. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows.
12. The Discharger shall submit the technical reports and work plans required by this Order for Regional Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.
13. **Solids Management.** By 1 January 2008, the Discharger shall submit a solids management plan that identifies measures taken or will be taken to ensure the proper handling and disposal of solids and efficient operation and maintenance. The plan shall have a time schedule for implementation of identified measures.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_.

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

Order Attachments:

Monitoring and Reporting Program

A. Site Location Map

Information Sheet

Standard Provisions (1 March 1991) (separate attachment to Discharger only)

ARP